# VOLUME 14 1985

## SUBJECT INDEX


Absorbed food, 595
  body weight
  eating
  small intestine
Acarbose, 569
  blood glucose
  gastric fistula
  sham feeding
Acetylcholinesterase staining, 9
  colchicine neurotoxicity
  lesions, dentate granule cells
  reactive sprouting
Adrenalectomy, 625
  caloric regulation
  obesity
  protein regulation
Adrenal medulla, 15
  serotonin
  postnatal development
Aging, 397
  methylmercury
  nucleic acids
  proteins
Amino acid release, 439
  ethanol
  monoamine release
  striatum
  transmitter release
Amygdala, 5
  immobilization
  kindling
  stress
  ulcer
Amygdala development, 159
  basolateral amygdala
  kittens
  morphometry
Amygdaloid central nucleus, 331
  electrophysiology
  rabbits
Anabolic hormones, 537
  body weight regulation
  dorsomedial nucleus
  ventromedial nucleus
Anatomical analysis, 477
  micro push-pull catheter
  neurotransmitter recovery
  push-pull perfusion
Angiotensin II
  binding sites, 409
  blood pressure, 307
  hypothalamus, 211
  iontophoresis, 211
  NG108-15 hybrid cells, 409
  oxytocin, 211
  route of administration, 307
  subfornical organ, 307
  vasopressin, 211
  volemia, 307
Anorectic agents, 657
  eating
  human studies
  naltrexone
  obesity
Anterograde degeneration methods, 55
  efferents
  salmons
  supracommissural ventral telencephalon
Anterograde HRP transport, 143
  limbic projections
  paraventricular nucleus
Antipyresis, 113
  thermoregulation
  vasopressin
Apparatus
  computer, 105
  driven shield, 103
  recording chamber, 197
Area postrema, 169
  brainstem
  emesis
  motion sickness
  muscarinic cholinergic receptors
Arousal, 205
  inbred mice
  neocortical spindles
Aversion, 423
  evoked potentials
  human studies
  lesions, thalamus
  pain
Axon collaterals
  electrophysiology, 123
  hypothalamus, 123
  immunocytochemistry, 123
  mamillary nuclei, 453
  paraventricular nucleus, 123
  transnuclear transport, 453
Axonal branching, 443
  cardiopulmonary nerves
  dogs
  fluorescent tracers
Axonal sprouting, 339
  ethanol
  fetal alcohol syndrome
  lesions, dentate gyrus

Basolateral amygdala, 159
  amygdala development
  kittens
  morphometry
Benzodiazepine receptor heterogeneity, 189
  flunitrazepan binding
  photolysis
  temperature
Binding sites, 409
  angiotensin II
  NG108-15 hybrid cells
Binge eating, 673
  obesity
  opioids
  sugar
Blood glucose
  acarbose, 569
  eating, 605
  gastric fistula, 569
  glucostatic hypothesis, 605
  meal initiation, 605
  meal pattern, 605
  sham feeding, 569
Blood pressure
  angiotensin II, 307
  hypertension, 227
  medulla oblongata, 227
  route of administration, 307
  subfornical organ, 307
  vasopressin, 227
  volemia, 307
Body temperature, 323
  morphine
  sex differences
  strain differences
Body weight
  absorbed food, 595
  eating, 427, 595, 663
  hamsters, 427
  high-fat diet, 427
  opioids, 663
  paraventricular nucleus, 427
  photoperiod, 427
  small intestine, 595
Body weight regulation, 537
  anabolic hormones
  dorsomedial nucleus
  ventromedial nucleus
Bovine cerebellum, 469
  cerebellar glomeruli
  serotonin uptake
Brain
  adrenal medulla, 15
  amygdala, 5, 103, 143, 159, 331
  arcuate nucleus of the hypothalamus, 369
  area postrema, 169
  basal forebrain, 63
  basolateral nucleus, 159
  bed nucleus of the stria terminalis, 217
  brainstem, 169, 227, 397, 453
  brainstem neurones, 25
  cardiopulmonary nerves, 443
  caudate nucleus, 133
  central nervous system, 287
  cerebellum, 469
  cerebral arteries, 179
  cerebral cortex, 307
  dentate granule cells, 9
  dentate gyrus, 315, 339
  diencephalon, 143
  dorsal motor nucleus, 49
  dorsal root afferents, 377
  dorsolateral tegmental nucleus, 63
  dorsomedial nucleus, 537
  entorhinal cortex, 339
  forebrain, 55
  globus pallidus, 251
  hippocampus, 9, 307, 315
  hypoglossal nucleus, 49
  hypothalamus, 85, 103, 123, 143, 211, 217, 297, 431, 505, 521, 585, 617
  interpeduncular nucleus, 63
  intralaminar nuclei, 287

lateral hypothalamus, 521
lateral nucleus, 159
lateral preoptic area, 55
lateral septum, 143
mamillary nuclei, 453
medial habenula, 63
medial preoptic nucleus, 261
medial septum, 315
medulla oblongata, 227
mesencephalon, 485
midbrain, 55, 397, 439
middle cervical ganglion, 443
motoneurons, 377
motor cortex, 39
nucleus accumbens, 401, 617
nucleus of the solitary tract, 49
nucleus periventricularis, 307
nucleus triangularis septi, 307
olfactory bulb, 55, 233
paraventricular area, 401, 427
paraventricular hypothalamus, 551
paraventricular nucleus, 123, 143, 521, 561
phrenic nucleus, 39
posterior fossa, 97
preoptic area, 217, 401
pyramidal cells, 315
sphenopalatine ganglion, 179
spinal cord, 377
stellate ganglion, 443
striatum, 91, 439
subfornical organ, 307
subiculum, 401
substantia nigra, 91, 287, 349
superior cervical ganglion, 97
suprachiasmatic nucleus, 143
supraoptic nucleus, 143
sympathetic nervous system, 505
tegmentum, 453
telencephalon, 55
thalamus, 223, 423, 453
trigeminal neuron, 273
ventral mesencephalic tegmentum, 315
ventral subiculum, 143
ventral tegmentum, 485
ventromedial hypothalamus, 521, 551
ventromedial nucleus, 133, 537
ventromedial thalamus, 287
Brain catecholamines, 617
glucoprivic feeding
glucose tolerance
ketones
turnover
Brain slice, 197
*in vitro* recording
perfusion system
recording chamber
Brainstem, 169
area postrema
emesis
motion sickness
muscarinic cholinergic receptors
Brainstem neurones, 25
cats
horseradish peroxidase
thoracic respiratory motoneurones
Brown adipose tissue, 585
knife-cuts, hypothalamus
obesity
thermogenesis
Brown fat, 577
energy expenditure
obesity
oxygen consumption
thermogenesis
Calcium influx, 369
excitotoxins
neuronal necrosis
neurotoxic mechanism
Caloric regulation, 625
adrenalectomy
obesity
protein regulation
Carbohydrate ingestion, 561
norepinephrine
nutrients
paraventricular nucleus
Cardiopulmonary nerves, 443
axonal branching
dogs
fluorescent tracers
Cats
brainstem neurones, 25
cervical nerve afferents, 97
cranial nerve afferents, 97
electrical brain stimulation, 217
evoked potentials, 223
flight behavior, 217
horseradish peroxidase, 25, 39
human studies, 223
late positive component, 223
limbic striatum, 239
morphine, 239
NE receptors, 239
phrenic nucleus, 39
posterior fossa, 97
thalamus, 223
thoracic respiratory motoneurones, 25, 39
Cerebellar glomeruli, 469
bovine cerebellum
serotonin uptake
Cerebral arteries, 179
cholinergic nerves
coexistence
vasoactive intestinal polypeptide
Cervical nerve afferents, 97
cats
cranial nerve afferents
posterior fossa
ChAT immunohistochemistry, 63
fluorescent tracers
interpeduncular nucleus
Cholinergic nerves, 179
cerebral arteries
coexistence
vasoactive intestinal polypeptide
Coexistence, 179
cerebral arteries
cholinergic nerves
vasoactive intestinal polypeptide
Colchicine neurotoxicity, 9
acetylcholinesterase staining
lesions, dentate granule cells
reactive sprouting
Computers, 105
data acquisition
interface
interspike interval
Corticotropin releasing factor, 511
eating
neuromodulators
Cranial nerve afferents, 97
cats
cervical nerve afferents
posterior fossa
Cultured neurons, 415
electron microscopy
insulin receptors
light microscopy
Data acquisition, 105
computers
interface
interspike interval
Dendrites, 485
fluorescence histochemistry
Golgi-Cox impregnation
mesencephalon development
rabbit
ventral tegmental area
Deprivation, 233
olfactory system
plasticity
Dogs, 443
axonal branching
cardiopulmonary nerves
fluorescent tracers
Dorsal motor nucleus, 49
GABA
hypoglossal nucleus
neurochemistry
nucleus of the solitary tract
Dorsal root afferents, 377
larval bullfrogs
motoneurons
spinal cord
Dorsomedial nucleus, 537
anabolic hormones
body weight
ventromedial nucleus
Drinking
hypothalamus, 521
neuropeptide Y, 521
Driven shield, 103
iontophoretic application
multi-barrel electrode
single neuron activity
Drug
acarbose, 569
acetoacetate, 617
butanediol, 617
calcium, 369
chloroethyl clonidine, 493
CL 218,872, 189
cocaine, 493
colchicine, 315
2-deoxy-D-glucose, 617
3-deoxypentonate, 431
2-deoxytetronate, 431
desipramine, 493
diaminobenzidine, 277
dibenamine, 493
[$^3$H]dihydromorphine, 301
5,7-dihydroxytryptamine, 643
[$^3$H]diprenorphine, 301
DOPAC, 85
dopamine, 15, 85
DSP4, 493
epinephrine, 15, 85
ethanol, 339, 439
[$^3$H]ethylketocyclazocine, 301
flunitrazepam, 189
fructose, 617
glutamate, 369
haloperidol, 117
hydroxybutyrate, 617
insulin, 505, 617
kainic acid, 315, 369
LiCl, 529
N-methylaspartate, 369
methylmercury, 397
mianserine, 117
morphine, 239, 251, 323, 681
naloxone, 681
naltrexone, 657

nimodipine, 369
norepinephrine, 15, 85, 561
pentylenetetrazol, 205
phenoxybenzamine, 493
propranolol, 205
saccharin, 569
soman, 117
$^3$H-spiperone, 117
sucrose, 569
tetramethylbenzidine, 277
$\Delta^9$-THC, 85
xylamine, 493
DSP4, 493
noradrenergic neurotoxins
opiate receptors
xylamine

Eating
absorbed food, 595
anorectic agents, 657
blood glucose, 605
body weight, 427, 595, 663
endogenous sugar acids, 431
gastric acid secretion, 431
gastric emptying, 687
genetic obesity, 505, 633
glucocorticoids, 505
glucoregulation, 687
glucostatic hypothesis, 605
hamsters, 427
high-fat diet, 427
human studies, 657
hyperphagia, 633
hypothalamic neuron activity, 431
hypothalamus, 521
leeches, 643
lipid deposition, 633
meal initiation, 605
meal pattern, 605
naltrexone, 657
neuromodulations, 511
neuropeptide Y, 521
nutrient composition, 633
obesity, 657
opioids, 663
opioid systems, 681
paraventricular nucleus, 427
photoperiod, 427
satiety, 687
serotonergic modulation, 643
slugs, 681
small intestine, 595
stress, 681
ventromedial hypothalamus, 505
Efferents, 55
anterograde degeneration methods
salmons
supracommissural ventral telencephalon
Electrical brain stimulation, 217
cats
flight behavior
Electron microscopy
cultured neurons, 415
insulin receptors, 415
light microscopy, 415
tetranethylbenzidine, 277
Electrophoretic application, 133
immunological study
rabbits
ventromedial nucleus
Electrophysiology
amygdaloid central nucleus, 331
axon collaterals, 123
hypothalamus, 123
immunocytochemistry, 123
nucleus accumbens, 401
paraventricular area, 401
paraventricular nucleus, 123
photic stimulation, 401
preoptic area, 401
rabbits, 331
sciatic nerve, 401
subiculum, 401
Emesis, 169
area postrema
brainstem
motion sickness
muscarinic cholinergic receptors
Endogenous sugar acids, 431
eating
gastric acid secretion
hypothalamic neuron activity
Energy expenditure, 577
brown fat
obesity
oxygen consumption
thermogenesis
Enkephalin, 251
globus pallidus
inhibition
morphine
Ethanol
amino acid release, 439
axonal sprouting, 339
fetal alcohol syndrome, 339
monoamine release, 439
striatum, 439
transmitter release, 439
Evoked potentials
aversion, 423
cats, 223
human studies, 223, 423
late positive component, 223
lesions, thalamus, 423
pain, 423
thalamus, 223
Excitotoxins, 369
calcium influx
neuronal necrosis
neurotoxic mechanism

Fetal alcohol syndrome, 339
axonal sprouting
ethanol
lesions, dentate gyrus
Flavor associations, 529
satiety
self-selection
sham feeding
toxicosis
Flight behavior, 217
cats
electrical brain stimulation
Flunitrazepam binding, 189
benzodiazepine receptor heterogeneity
photolysis
temperature
Fluorescence histochemistry, 485
dendrites
Golgi-Cox impregnation
mesencephalon development
rabbit
ventral tegmental area
Fluorescent tracers
axonal branching, 443
cardiopulmonary nerves, 443
ChAT immunohistochemistry, 63
dogs, 443
interpeduncular nucleus, 63
Free feeding, 693
meal patterns
regulation
satiety

GABA, 49
dorsal motor nucleus
hypoglossal nucleus
neurochemistry
nucleus of the solitary tract
Ganglioside GMI, 91
neurotrophic agents
substantia nigra grafts
trophic substances
Gastric acid secretion, 431
eating
endogenous sugar acids
hypothalamic neuron activity
Gastric emptying, 687
eating
glucoregulation
satiety
Gastric fistula, 569
acarbose
blood glucose
sham feeding
Genetic obesity
eating, 505, 633
glucocorticoids, 505
hyperphagia, 633
lipid deposition, 633
nutrient composition, 633
ventromedial hypothalamus, 505
Globus pallidus, 251
enkephalin
inhibition
morphine
Glucocorticoids, 505
eating
genetic obesity
ventromedial hypothalamus
Glucoprivic feeding, 617
brain catecholamines
glucose tolerance
ketones
turnover
Glucose regulation, 687
eating
gastric emptying
satiety
Glucose tolerance, 617
brain catecholamines
glucoprivic feeding
ketones
turnover
Glucostatic hypothesis, 605
blood glucose
eating
meal initiation
meal pattern
Golgi-Cox impregnation, 485
dendrites
fluorescence histochemistry
mesencephalon development
rabbit
ventral tegmental area
GTP, 301
guanyl nucleotides
$\kappa$-opioid binding
Guanyl nucleotides, 301
GTP
$\kappa$-opioid binding

Hamsters, 427
body weight
eating
high-fat diet
paraventricular nucleus
photoperiod
High-fat diet, 427
body weight
eating
hamsters
paraventricular nucleus
photoperiod
High performance liquid chromatography, 85
plasma catecholamine levels
$\Delta^9$THC
Histological atlas, 349
monkeys
substantia nigra
ventricular coordinates
Hormone
corticosterone, 625
corticotropin releasing factor, 511
insulin, 529
luteinizing hormone, 493
Hormones, 525
integrative peptides
neurotransmitters
Horseradish peroxidase
brainstem neurones, 25
cats, 25, 39
phrenic nucleus, 39
thoracic respiratory motoneurones, 25, 39
Hyperactivity, 315
lesions, hippocampus
non-operant behavior
operant behavior
Hyperphagia, 633
eating
genetic obesity
lipid deposition
nutrient composition
Hypertension, 227
blood pressure
medulla oblongata
vasopressin
Hypertrophy, 297
lesions, hypothalamus
Hypoglossal nucleus, 49
dorsal motor nucleus
GABA
neurochemistry
nucleus of the solitary tract
Hypothalamic neuron activity, 431
eating
endogenous sugar acids
gastric acid secretion
Hypothalamus
angiotensin II, 211
axon collaterals, 123
drinking, 521
eating, 521
electrophysiology, 123
immunocytochemistry, 123
iontophoresis, 211
neuropeptide Y, 521
oxytocin, 211
paraventricular nucleus, 123
vasopressin, 211
Human studies
anorectic agents, 657
aversion, 423
cats, 223
eating, 657
evoked potentials, 223, 423
late positive component, 223
lesions, thalamus, 423
naltrexone, 657
obesity, 657
pain, 423
thalamus, 223

Immobilization, 5
amygdala
kindling
stress
ulcer
Immunocytochemistry, 123
axon collaterals
electrophysiology
hypothalamus
paraventricular nucleus
Immunological study, 133
electrophoretic application
rabbits
ventromedial nucleus
Inbred mice, 205
arousal
neocortical spindles
Inhibition, 251
enkephalin
globus pallidus
morphine
Insulin receptors, 415
cultured neurons
electron microscopy
light microscopy
Integrative peptides, 525
hormones
neurotransmitters
Interface, 105
computers
data acquisition
interspike interval
Interpeduncular nucleus, 63
ChAT immunohistochemistry
fluorescent tracers
Interspike interval, 105
computers
data acquisition
interface
*In vitro* recording, 197
brain slice
perfusion system
recording chamber
Iontophoresis, 211
angiotensin II
hypothalamus
oxytocin
vasopressin
Iontophoretic application, 103
driven shield
multi-barrel electrode
single neuron activity

Ketones, 617
brain catecholamines
glucoprivic feeding
glucose tolerance
turnover
Kindling, 5
amygdala
immobilization
stress
ulcer
Kittens, 159
amygdala
basolateral amygdala
morphometry
Knife-cuts, hypothalamus, 585
brown adipose tissue
obesity
thermogenesis

Larval bullfrogs, 377
dorsal root afferents
motoneurons
spinal cord
Late positive component, 223
cats
evoked potentials
human studies
thalamus
Leeches, 643
eating
serotonergic modulation
Lesions, dentate granule cells, 9
acetylcholinesterase staining
colchicine neurotoxicity
reactive sprouting
Lesions, dentate gyrus, 339
axonal sprouting
ethanol
fetal alcohol syndrome
Lesions, hippocampal, 315
hyperactivity
non-operant activity
operant behavior
Lesions, hypothalamus, 297
hypertrophy
Lesions, paraventricular hypothalamus, 551
lesions, ventromedial hypothalamus
obesity
Lesions, thalamus
aversion, 423
evoked potentials, 423
human studies, 423
limbic system, 287
nigral stimulation, 287
pain, 423
reticular system, 287
sensory motor system, 287
Lesions, ventromedial hypothalamus, 551
lesions, paraventricular hypothalamus
obesity
Light microscopy, 415
cultured neurons
electron microscopy
insulin receptors
Light pulses, 1
receptor potential latent period
receptor potential magnitude
Limbic projections, 143
anterograde HRP transport
paraventricular nucleus
Limbic striatum, 239
cats
morphine
NE receptors
Limbic system, 287
lesions, thalamus
nigral stimulation
reticular system
sensory motor system
Lipid deposition, 633
eating
genetic obesity
hyperphagia
nutrient composition

Mamillary nuclei, 453
  axon collaterals
  transnuclear transport
Meal initiation, 605
  blood glucose
  eating
  glucostatic hypothesis
  meal pattern
Meal patterns
  blood glucose, 605
  eating, 605
  free feeding, 693
  glucostatic hypothesis, 605
  meal initiation, 605
  regulation, 693
  satiety, 693
Medial preoptic nucleus, 261
  neural connection
  reciprocal connection
  WGA-HRP method
Medulla oblongata, 227
  blood pressure
  hypertension
  vasopressin
Mesencephalon development, 485
  dendrites
  fluorescence histochemistry
  Golgi-Cox impregnation
  rabbit
  ventral tegmental area
Method
  anatomical analysis, 477
  anterograde degeneration methods, 55
  cerebellar glomeruli, 469
  ChAT immunohistochemistry, 63
  $^{14}$C deoxyglucose method, 287
  electron microscopy, 277, 415, 453
  electrophysiological analysis, 123
  fluorescence histochemistry, 485
  fluorescent tracers, 63, 443
  Golgi-Cox impregnation, 485
  horseradish peroxidase, 25, 39, 97, 123, 143, 277, 339
  HPLC, 85
  HPLC-EC, 15
  immunohistochemistry, 15, 123, 179
  intracerebral recordings, 223
  light microscopy, 143, 415
  micro push-pull catheter, 477
  nine-barrel micropipette, 103
  perfusion system, 197
  photoaffinity labeling, 189
  single unit recording, 133
  WGA-HRP, 261, 453
Methylmercury, 397
  aging
  nucleic acids
  proteins
Micro push-pull catheter, 477
  anatomical analysis
  neurotransmitter recovery
  push-pull perfusion
Monkeys, 349
  histological atlas
  substantia nigra
  ventricular coordinates
Monoamine release, 439
  amino acid release
  ethanol
  striatum
  transmitter release
Morphine
  body temperature, 323
  cats, 239
  enkephalin, 251
  globus pallidus, 251
  inhibition, 251
  limbic striatum, 239
  NE receptors, 239
  sex differences, 323
  strain differences, 323
Morphometry, 159
  amygdala development
  basolateral amygdala
  kittens
Motion sickness, 169
  area postrema
  brainstem
  emesis
  muscarinic cholinergic receptors
Motoneurons, 377
  dorsal root afferents
  larval bullfrogs
  spinal cord
$\alpha$-MSH, 327
  rabbits
  thermoregulation
  tolerance
Multi-barrel electrode, 103
  driven shield
  iontophoretic application
  single neurons activity
Muscarinic cholinergic receptors, 169
  area postrema
  brainstem
  emesis
  motion sickness

Naltrexone, 657
  anorectic agents
  eating
  human studies
  obesity
Neocortical spindles, 205
  arousal
  inbred mice
NE receptors, 239
  cats
  limbic striatum
  morphine
Neural connection, 261
  medial preoptic nucleus
  reciprocal connection
  WGA-HRP method
Neurochemistry, 49
  dorsal motor nucleus
  GABA
  hypoglossal nucleus
  nucleus of the solitary tract
Neuroleptic receptors, 117
  organophosphates
  soman intoxication
Neuromodulators, 511
  corticotropin releasing factor
  eating
Neuronal necrosis, 369
  calcium influx
  excitotoxins
  neurotoxic mechanism
Neuropeptide Y, 521
  drinking
  eating
  hypothalamus
Neurotoxic mechanism, 369
  calcium influx
  excitotoxins
  neuronal necrosis
Neurotransmitter recovery, 477
  anatomical analysis
  micro push-pull catheter
  push-pull perfusion
Neurotransmitters, 525
  hormones
  integrative peptides
Neurotrophic agents, 91
  ganglioside GM1
  substantia nigra grafts
  trophic substances
NG 108-15 hybrid cells, 409
  angiotensin II
  binding sites
Nigral stimulation, 287
  lesions, thalamus
  limbic system
  reticular system
  sensory motor system
Non-operant activity, 315
  hyperactivity
  lesions, hippocampus
  operant behavior
Noradrenergic neurotoxins, 493
  DSP4
  opiate receptors
  xylamine
Norepinephrine, 561
  carbohydrate ingestion
  nutrients
  paraventricular nucleus
Nucleic acids, 397
  aging
  methylmercury
  proteins
Nucleus accumbens, 401
  electrophysiology
  paraventricular area
  photic stimulation
  preoptic area
  sciatic nerve
  subiculum
Nucleus of the solitary tract, 49
  dorsal motor nucleus
  GABA
  hypoglossal nucleus
  neurochemistry
Nutrient composition, 633
  eating
  genetic obesity
  hyperphagia
  lipid deposition
Nutrients, 561
  carbohydrate ingestion
  norepinephrine
  paraventricular nucleus

Obesity
  adrenalectomy, 625
  anorectic agents, 657
  binge eating, 673
  brown adipose tissue, 585
  brown fat, 577
  caloric regulation, 625
  eating, 657
  energy expenditure, 577
  human studies, 657
  knife-cuts, hypothalamus, 585
  lesions, paraventricular hypothalamus, 551
  lesions, ventromedial hypothalamus, 551
  naltrexone, 657
  opioids, 673
  oxygen consumption, 577

protein regulation, 625
sugar, 673
thermogenesis, 577, 585
Olfactory system, 233
deprivation
plasticity
Operant behavior, 315
hyperactivity
lesions, hippocampus
non-operant activity
Opiate receptors, 493
DSP4
noradrenergic neurotoxins
xylamine
κ-Opioid binding, 301
GTP
guanyl nucleotides
Opioid systems, 681
eating
slugs
stress
Opioids
binge eating, 673
body weight, 663
eating, 663
obesity, 673
sugar, 673
Organophosphates, 117
neuroleptic receptors
soman intoxication
Oxygen consumption, 577
brown fat
energy expenditure
obesity
thermogenesis
Oxytocin, 211
angiotensin II
hypothalamus
iontophoresis
vasopressin

Pain
aversion, 423
evoked potentials, 423
human studies, 423
lesions, thalamus, 423
stimulus-response relation, 273
tooth pulp, 273
trigeminal neuron, 273
Paraventricular area, 401
electrophysiology
nucleus accumbens
photic stimulation
preoptic area
sciatic nerve
subiculum
Paraventricular nucleus
anterograde HRP transport, 143
axon collaterals, 123
body weight, 427
carbohydrate ingestion, 561
eating, 427
electrophysiology, 123
hamsters, 427
high-fat diet, 427
hypothalamus, 123
immunocytochemistry, 123
limbic projections, 143
norepinephrine, 561
nutrients, 561
photoperiod, 427
Peptide
angiotensin, 525
angiotensin II, 211, 307, 409
bombesin, 511, 529
CCK, 525
CCK-8, 529
cholecystokinin, 511
corticotropin releasing factor, 511
dynorphin, 511
enkephalin, 251, 301
α-MSH, 327
neuropeptide Y, 511, 521
oxytocin, 123, 211
peptide YY, 511
vasoactive intestinal polypeptide, 179
vasopressin, 113, 123, 211, 227
Perfusion system, 197
brain slice
*in vitro* recording
recording chamber
Photic stimulation, 401
electrophysiology
nucleus accumbens
paraventricular area
preoptic area
sciatic nerve
subiculum
Photolysis, 189
benzodiazepine receptor heterogeneity
flunitrazepam binding
temperature
Photoperiod, 427
body weight
eating
hamsters
high-fat diet
paraventricular nucleus
Phrenic nucleus, 39
cats
horseradish peroxidase
thoracic respiratory motoneurons
Plasma catecholamine levels, 85
high performance liquid chromatography
$\Delta^9$-THC
Plasticity, 233
deprivation
olfactory system
Posterior fossa, 97
cats
cervical nerve afferents
cranial nerve afferents
Postnatal development, 15
adrenal medulla
serotonin
Preoptic area, 401
electrophysiology
nucleus accumbens
paraventricular area
photic stimulation
sciatic nerve
subiculum
Protein regulation, 625
adrenalectomy
caloric regulation
obesity
Proteins, 397
aging
methylmercury
nucleic acid
Push-pull perfusion, 477
anatomical analysis
micro push-pull catheter
neurotransmitter recovery

Rabbit
amygdaloid central nucleus, 331
dendrites, 485
electrophoretic application, 133
electrophysiology, 331
fluorescence histochemistry, 485
Golgi-Cox impregnation, 485
immunological study, 133
mesencephalon development, 485
α-MSH, 327
thermoregulation, 327
tolerance, 327
ventral tegmental area, 485
ventromedial nucleus, 133
Reactive sprouting, 9
acetylcholinesterase staining
colchicine neurotoxicity
lesions, dentate granule cells
Receptor potential latent period, 1
light
receptor potential magnitude
Receptor potential magnitude, 1
light pulses
receptor potential latent period
Reciprocal connection, 261
medial preoptic nucleus
neural connection
WGA-HRP method
Recording chamber, 197
brain slice
*in vitro* recording
perfusion system
Regulation, 693
free feeding
meal patterns
satiety
Reticular system, 287
lesions, thalamus
limbic system
nigral stimulation
sensory motor system
Route of administration, 307
angiotensin II
blood pressure
subfornical organ
volemia

Salmon, 55
anterograde degeneration methods
efferents
supracommissural ventral telencephalon
Satiety
eating, 687
flavor associations, 529
free feeding, 693
gastric emptying, 687
glucoregulation, 687
meal patterns, 693
regulation, 693
self-selection, 529
sham feeding, 529
toxicosis, 529
Sciatic nerve, 401
electrophysiology
nucleus accumbens
paraventricular area
photic stimulation
preoptic area
subiculum
Self-selection, 529
flavor associations
satiety
sham feeding
toxicosis

Sensory motor system, 287
lesions, thalamus
limbic system
nigral stimulation
reticular system
Serotonergic modulation, 643
eating
leeches
Serotonin, 15
adrenal medulla
postnatal development
Serotonin uptake, 469
bovine cerebellum
cerebellar glomeruli
Sex differences, 323
body temperature
morphine
strain differences
Sham feeding
acarbose, 569
blood glucose, 569
flavor associations, 529
gastric fistula, 569
satiety, 529
self-selection, 529
toxicosis, 529
Single neuron activity, 103
driven shield
iontophoretic application
multi-barrel electrode
Slugs, 681
eating
opioid systems
stress
Small intestine, 595
absorbed food
body weight
eating
Soman intoxication, 117
neuroleptic receptors
organophosphates
Spinal cord, 377
dorsal root afferents
larval bullfrogs
motoneurons
Stimulus response relation, 273
pain
tooth pulp
trigeminal neuron
Strain differences, 323
body temperature
morphine
sex differences
Stress
amygdala, 5
eating, 681
immobilization, 5
kindling, 5
opioid systems, 681
slugs, 681
ulcer, 5
Striatum, 439
amino acid release
ethanol
monoamine release
transmitter release
Subfornical organ, 307
angiotensin II
blood pressure
route of administration
volemia
Subiculum, 401
electrophysiology
nucleus accumbens
paraventricular area
photic stimulation
preoptic area
sciatic nerve
Substantia nigra, 349
histological atlas
monkeys
ventricular coordinates
Substantia nigra grafts, 91
ganglioside GM1
neurotrophic agents
trophic substances
Sugar, 673
binge eating
obesity
opioids
Supracommissural ventral telencephalon, 55
anterograde degeneration methods
efferents
salmons

Temperature, 189
benzodiazepine receptor heterogeneity
flunitrazepam binding
photolysis
Tetramethylbenzidine, 277
electron microscopy
tetramethylbenzidine
Thalamus, 223
cats
evoked potentials
human studies
late positive component
$\Delta^9$-THC, 85
high performance liquid chromatography
plasma catecholamine levels
Thermogenesis
brown adipose tissue, 585
brown fat, 577
energy expenditure, 577
knife-cuts, hypothalamus, 585
obesity, 577, 585
oxygen consumption, 577
Thermoregulation
antipyresis, 113
$\alpha$-MSH, 327
rabbits, 327
tolerance, 327
vasopressin, 113
Thoracic respiratory motoneurons
brainstem neurons, 25
cats, 25, 39
horseradish peroxidase, 25, 39
phrenic nucleus, 25
Tolerance, 327
$\alpha$-MSH
rabbits
thermoregulation
Tooth pulp, 273
pain
stimulus response relation
trigeminal neuron
Toxicosis, 529
flavor associations
satiety
self-selection
sham feeding
Transmitter release, 439
amino acid release
ethanol
monoamine release
striatum
Transnuclear transport, 453
axon collaterals
mamillary nuclei
Trigeminal neurons, 273
pain
stimulus response relation
tooth pain
Trophic substances, 91
ganglioside GM1
neurotrophic agents
substantia nigra grafts
Turnover, 617
brain catecholamines
glucoprivic feeding
glucose tolerance
ketones

Ulcer, 5
amygdala
immobilization
kindling
stress

Vasoactive intestinal polypeptide, 179
cerebral arteries
cholinergic nerves
coexistence
Vasopressin
angiotensin II, 211
antipyresis, 113
blood pressure, 227
hypertension, 227
hypothalamus, 211
iontophoresis, 211
medulla oblongata, 227
oxytocin, 211
thermoregulation, 113
Ventral tegmental area, 485
dendrites
fluorescence histochemistry
Golgi-Cox impregnation
mesencephalon development
rabbit
Ventricular coordinates, 349
histological atlas
monkeys
substantia nigra
Ventromedial hypothalamus, 505
eating
genetic obesity
glucocorticoids
Ventromedial nucleus
anabolic hormones, 537
body weight regulation, 537
dorsomedial nucleus, 537
electrophoretic application, 133
immunological study, 133
rabbits, 133
Volemia, 307
angiotensin II
blood pressure
route of administration
subfornical organ

WGA-HRP method, 261
medial preoptic nucleus
neural connection
reciprocal connection

Xylamine, 493
DSP4
noradrenergic neurotoxins
opiate receptors

# AUTHOR INDEX


Allen, G. V., 453
Antunes-Rodrigues, J., 297
Aou, S., 103
Aprison, M. H., 49
Armour, J. A., 443
Armstrong, D. L., 469

Banet, M., 113
Barlament, J., 323
Bartness, T. J., 427, 663
Bartolome, J., 397
Beattie, M. S., 377
Beduk, A., 97
Beer, B., 189
Behrens, M. E., 1
Bellush, L. L., 617
Bernardis, L. L., 537
Besson, M. J., 287
Billington, C. J., 663
Bittman, E. L., 427
Blessing, W. W., 227
Borysenko, M., 85
Bracco, E. F., 657
Brandon, P., 605
Bray, G. A., 505
Bresnahan, J. C., 377
Brizzee, K. R., 169
Brunjes, P. C., 233
Brutus, M., 217
Butcher, L. L., 63
Butcher, W. I., 469
Bystrzycka, E. K., 25, 39

Campfield, L. A., 605
Carlson, I. H., 673
Carlton, J., 617
Castonguay, T. W., 503, 625
Chambers, J. W., 585
Chang, P., 551
Chester, N. A., 117
Chiba, T., 261
Chin, A. S., 521
Cobbett, P., 123
Collier, G. H., 693
Cools, A. R., 239
Coscina, D. V., 585
Crawford, I. L., 9
Cunningham, S. D., 439

de Beaurepaire, R., 211
Deems, D. A., 529
Desban, M., 287
Dewey, S. L., 339
DiMicco, S. K., 49
Drust, E. G., 9

Eguchi, K., 273

Fahy, J. L., 1
Feldman, S., 401
Felten, D. L., 485
Francois, C., 349
Freed, W. J., 91
Frey, J. M., 251
Fullerton, D. T., 673

Garrett, K. M., 189
Getto, C. J., 673
Girault, J. A., 287
Glowinski, J., 287
Gosnell, B. A., 511, 663
Gueguen, B., 307
Gurley-Orkin, L., 477

Hamill, G. S., 179
Hara, H., 179
Harano, S., 423
Hashim, S. A., 657
Hatton, G. I., 123
Henke, P. G., 5
Heyner, S., 349
Himms-Hagen, J., 585
Hirst, M., 681
Hoebel, B. G., 525
Hogan, S., 585
Holdeman, M., 327
Holloway, F. A., 315
Holzwarth, M. A., 15
Hopkins, D. A., 443, 453
Horwitz, B. A., 577
Huffman, R. D., 251
Hwang, C.-J., 409

Ideda, N., 273
Inoue, M., 197
Ishibashi, S., 307

Jacobowitz, D. M., 179
Jacobson, W., 493
Jeulin, A., 211
Jollis, J. G., 97
Jones, R. E., 529

Kapp, B. S., 331
Katayama, Y., 223, 423
Kavaliers, M., 681
Kavlock, R. J., 397
Kawashima, M., 431
Keller, J. T., 97
Killian, A., 415
Kissileff, H. R., 657
Kline, S., 485
Koopmans, H. S., 595
Krahn, D. D., 511
Kumar, M. S. A., 85

Labruyere, J., 369
Lee, M. F., 301
Leibowitz, S. F., 521, 561
Lemann, W., 277
Lent, C. M., 643
Levine, A. S., 511, 663
Levine, M. S., 159
Lippa, A. S., 189
Lipton, J. M., 327
Liuzzi, F. J., 377

McBride, W. J., 439
McCann, M. J., 687
McCann, S. M., 297
McDonald, T. J., 551

Mack, K. J., 301
Maggio, C. A., 657
Marubayashi, U., 297
Menking, D., 117
Meyerson, L. R., 189
Moore, B. J., 577
Morley, J. E., 511, 663
Mueller, W. J., 1
Murata, Y., 261
Murphy, J. M., 439
Myers, R. D., 477

Nail, B. S., 25, 39
Nakano, Y., 103
Nicolaidis, S., 211, 307
Nishino, H., 103
Nissenbaum, J. W., 569

Oetting, R. L., 529
Ogata, N., 197
Oka, Y., 55
Okumoto, N., 55
Oldfield, B. J., 143
Olney, J. W., 369
Ono, T., 133
Oomura, Y., 103, 133, 307, 431

Pachman, S., 397
Park, I., 585
Pascoe, J. P., 331
Patel, V., 85
Pedigo, N. W., Jr., 169
Percheron, G., 349
Pfohl, D. N., 657
Presta, E., 657
Price, M. T., 369

Quock, R. M., 323

Reiner, A. M., 415
Reis, D. J., 227
Reynolds, I., 415
Rikard-Bell, G. C., 25, 39
Rowland, N. E., 617, 625
Ryan, L. J., 205
Rye, D. B., 277

Salm, A. K., 123
Samson, L., 369
Saper, C. B., 277
Saphier, D., 401
Satoh, T., 273
Satou, M., 55
Saunders, M. C., 97
Savaki, H. E., 287
Sawetawan, C., 15
Schmid, K., 105
Scalafani, A., 569
Shaikh, M. B., 217
Shiga, T., 55
Shih, T.-M., 117
Shiraishi, T., 431
Shull, R. N., 315
Siegel, A., 217
Siegel, E. E., 217
Silverman, A.-J., 143
Simon, J. R., 49
Slotkin, T. A., 397
Smith, F. J., 605
Stanley, B. G., 521
Stern, J. S., 577, 625
Stricker, E. M., 687
Sugimori, M., 133
Sullivan, R. M., 5
Sved, A. F., 227
Swift, W. J., 673

Tabakoff, B., 189
Takeuchi, Y., 453
Terrian, D. M., 469
Teskey, G. C., 681
Thornton, S. N., 211
Tomney, P. A., 443
Tretter, J. B., 561
Tsubokawa, T., 223, 423
Tsukiyama, T., 223, 423

Ueda, K., 55

Valdes, J. J., 117
VanderWeele, D. A., 529
Vasselli, J. R., 633, 657
Vaughn, L. K., 323

Wade, G. N., 427
Wainer, B. H., 277
Wakefield, C. L., 159
Weingarten, H. P., 551
Weiss, G. F., 561
Wennogle, L. P., 189
West, J. R., 339
Weyhenmeyer, J. A., 301, 409, 415
Whalley, C., 117
Wieland, U.-E., 113
Wilkinson, D. A., 493
Wilkinson, M., 493
Wojcechowskyj, J. A., 323
Woolf, N. J., 63
Wu, P. H., 469
Wulff, V. J., 1

Yamada, S., 273
Yamamoto, T., 103
Yee, F., 561
Yelnik, J., 349